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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,095	03/26/2001	Antonius Adrianus Cornelis Maria Kalker	NL000101	7725

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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BRIARCLIFF MANOR, NY 10510

EXAMINER

YOUNG, BRIAN K

ART UNIT PAPER NUMBER

2819

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/817,095

Applicant(s)

KALKER ET AL.

Examiner

Brian Young

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-13 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 9, 10 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Claims 9,10 and 14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can not depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 9,10 and 14 have not been further treated on the merits.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-8,11-13, and 15-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Van Dijk et al.

Van Dijk disclose a method (see abs) of “decoding a stream of **channel bits** of a signal relating to a **binary channel** signal into a steam of source bits of a signal relating to a binary source signal stream of channel bits, of a signal relating to a binary channel, is decoded into a stream of source bits, of a signal relating to a binary source. **This binary channel includes a main channel and a secondary channel. This secondary channel is embedded in the main channel.** Errors in the stream of secondary channel bits are corrected using a stream of corrected main channel bits. This stream of corrected main channel bits is reconstructed from a stream of corrected source bits. The secondary channel can be embedded in the main channel in different manners, e.g. **via multi-level coding or via merging-bit coding**”.

FIG. 1 shows an embodiment of an encoding method. **User** data 1 is partitioned between the main channel 2, comprising main **user** bits 3, and the secondary channel 4, comprising secondary **user** bits 5. In step 6, error correction is applied on the main **user** bits 3, yielding main source bits 7. These main source bits 7 comprise **user** data and parities generated in step 6. In step 8, encoding of the main source bits 7 yields the main channel bits 9 without the amplitude information.

Error correction is applied on the secondary **user** bits 5, yielding secondary source bits

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11. These secondary source bits 11 comprise **user** data and parities generated in step 10. The secondary source bits 11 are further split into a secondary pit channel 12, with secondary pit bits and a secondary land channel 13, with secondary land bits. In step 14, a d=0 DC-free channel code is used for encoding both channels to generate secondary pit channel bits 15 and secondary land channel bits 16.

The secondary channel bits yield the amplitude information to be incorporated in the waveform that is to be generated from the secondary channel bitstream. In step 17, the main channel bits 9, the secondary pit channel bits 15 and the secondary land channel bits 16 are combined to the assembled channel bits 18. These assembled channel bits 18 are then written on a record carrier 19.

When writing the assembled channel bits on the record carrier, the multi-level coding is only applied for ***runlengths In.sub.min or greater, in which In.sub.min is a predetermined value***. This multi-level coding can be performed in different ways. For example, the pits and lands can be mastered in a so-called "peanut"-structure which is realized by turning off the laser at a predetermined place and for a predetermined time in the case of a pit and by turning on the laser at a predetermined place and for a predetermined time in the case of a land. Also a narrower pit structure can be used for multi-level coding.

The secondary channel 2 is dependent on the main channel 4 due to the linking of the secondary amplitude effect with the longer runlengths. The detection problem caused by the hierarchy between main and secondary channels will be explained for the case  $In.sub.min = 6$ . Suppose, for instance, that a channel error occurred in the main channel

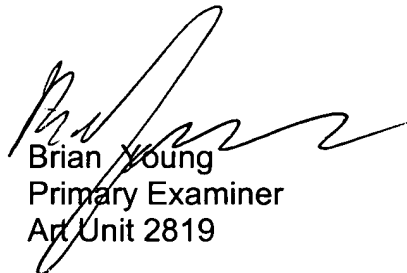
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(a simple transition shift) which turned an I5 into an I6. The first run does not carry an additional bit, whereas the second one does. Therefore, straightforward detection of the secondary channel yields a bit insertion. A bit deletion takes place when an I6 is turned into an I5 during RLL detection. In fact, simple transition shifts in the RLL channel can lead to bit slips (bit insertions and bit deletions) in the LML channel. This is further explained with reference to FIG. 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Young whose telephone number is 571-272-1816. The examiner can normally be reached on Mon-Fri 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Brian Young  
Primary Examiner  
Art Unit 2819

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